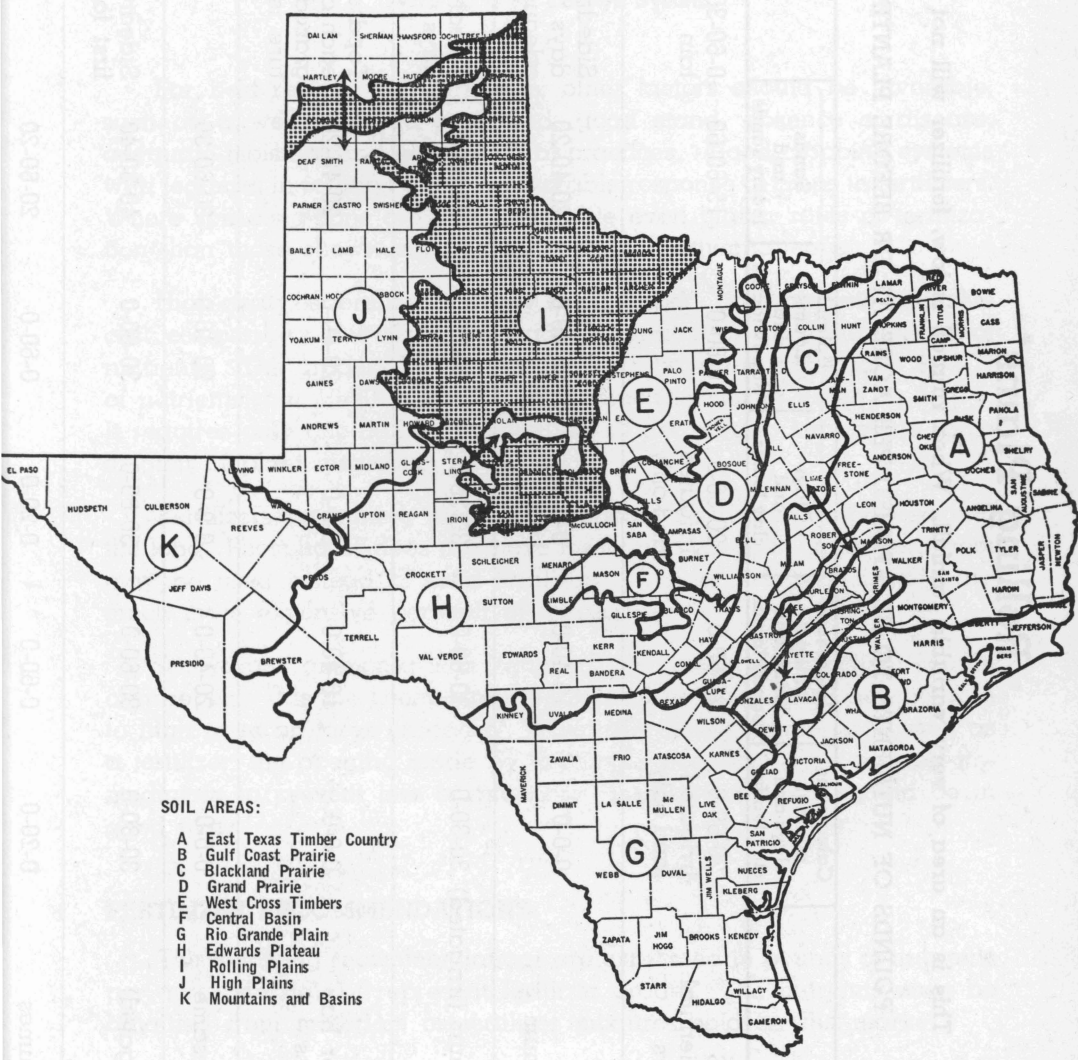


# FERTILIZER RECOMMENDATIONS

## *for the Rolling Plains*



- SOIL AREAS:
- A East Texas Timber Country
  - B Gulf Coast Prairie
  - C Blackland Prairie
  - D Grand Prairie
  - E West Cross Timbers
  - F Central Basin
  - G Rio Grande Plain
  - H Edwards Plateau
  - I Rolling Plains
  - J High Plains
  - K Mountains and Basins

Adapted from Texas Agricultural Experiment Station Bulletin 431, by W. T. Carter.

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# FERTILIZER RECOMMENDATIONS

## *for the Rolling Plains*

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For best results with fertilizers, other factors should be favorable, such as a well-prepared seed bed, good stand, absence of disease, adequate moisture and good cultural practices. Good cropping systems with legumes in rotation aid in a favorable response of crops to fertilizers. Where soil conditions are very favorable even higher rates of fertilization than those shown may be economically advantageous.

High-analysis fertilizers usually are cheaper. Low-analysis fertilizers cost less per bag, but the cost per acre is greater for the same amount of nutrients. The grades, 5-10-5 and 10-20-10, have the same ratio (1-2-1) of nutrients, but 10-20-10 has twice as much fertilizing value as 5-10-5. It requires only one-half as much 10-20-10 per acre to supply the same amount of plant nutrients.

Fertilizers containing phosphorus should be drilled or plowed into the land. Phosphorus does not move freely into the soil. Liquid fertilizers may be used instead of solid fertilizers. Liquid fertilizers usually are much more expensive per unit of nutrients.

Anhydrous ammonia is a liquefied gas and is an excellent source of nitrogen. It is the cheapest nitrogen fertilizer when used at moderate to high rates on large acreages. When anhydrous ammonia is used as a fertilizer, the opening made by the applicator should be covered immediately to prevent loss of ammonia. Likewise, the soil should be in good tilth.

### FERTILIZER RECOMMENDATIONS:

The following recommendations are expressed in pounds of nutrients per acre and do not represent fertilizer grades. The nutrients must be obtained from materials or fertilizer mixtures sold on the market.

For example, a recommendation calling for 30-60-30, which is a 1-2-1 ratio can be obtained by applying 600 pounds of 5-10-5 or 250 pounds of 12-24-12 or 300 pounds of 10-20-10. Again, if a recommendation calls for 15-60-0, this may be obtained by applying about 400 pounds of a 4-16-0 or 125 pounds of 11-48-0.

**Row Crops:** Fertilizer usually is applied at the time of planting or just before. Fertilizers are more efficiently used by most crops when applied in a band two to three inches to the side and two to three inches below the seed.

If equipment for applying fertilizers in bands while planting or cultivating is not available, apply the fertilizer in the water furrow and bed on it.

If large quantities of nitrogen fertilizer are to be applied part of the nitrogen should be drilled into the soil with the phosphorus and potash and the remainder applied 35 to 45 days later as a side or topdressing.

**Small Grains:** Fertilizers for small grains should be applied in a band midway between the seed rows through a separate drill spout. Fertilizers containing nitrogen and potash should not be allowed to touch the seed.

Phosphorus, potash and part of the nitrogen should be applied at or before seeding. The rest of the nitrogen should be applied in the spring before plants begin to joint.

**Pastures:** For establishing improved pastures, phosphorus, potash and part of the nitrogen should be drilled or plowed in. The remainder of the nitrogen should be applied broadcast in 40 to 60 days as a topdressing. For maintenance, topdress as needed.

**Fruit Trees:** Fertilizer for fruit trees may be applied over the entire area covered by the orchard when the trees are mature. In nonbearing orchards, the fertilizer should be applied over the area covered by the spread of the limbs. Keep fertilizer 1 foot away from tree trunks. Cultivate fertilizer applications into the soil.

Recommendations for fertilizers in this circular are those found best by experiments, tests and practical experience in the field. They range from the calcareous (limy) river valley clays to the sands of the uplands. If your farm contains both clays and loams, there will be two recommendations for your land.

When crops follow legumes turned under, the amount of fertilizer to be applied at planting may be reduced. Side or topdress with the amount of fertilizer suggested.

The letters NR mean that the crop is not recommended for this class of soils.

THE FERTILIZER RECOMMENDATIONS CONTAINED HEREIN ARE GENERAL IN SCOPE. SOILS VARY IN FIELDS AND AREA SO MUCH THAT SOIL TESTS SHOULD BE MADE IN ORDER TO RECOMMEND MORE DEFINITE AND ECONOMICAL FERTILIZER APPLICATIONS.

## Rolling Plains\*

This is an area of very variable rainfall. When rainfall is low, fertilizer will not pay.

### POUNDS OF NUTRIENTS TO BE APPLIED PER ACRE AT OR BEFORE PLANTING

	Calcareous alluvial clays and clay loams	Calcareous alluvial loams and sandy loams	Clays and clay loams	Uplands Loams and sandy loams	Sands and loamy sands	Remarks
FIELD CROPS						
Alfalfa & biennial Sweetclovers	20-60-0 Irrigated land only	20-60-0	20-60-0 Irrigated land only	0-60-0	15-60-60	0-60-30 annually to maintain
Corn & Grain sorghum	0-0-0	10-40-0	0-0-0	20-40-0	20-40-20	Sidedress with 20-0-0 in 35 days if soil moisture is adequate
Grain sorghum (irrigated)	30-30-0	30-60-0	30-30-0	30-60-0	30-60-30	Sidedress with 60-0-0 in 35 days
Sudan Sorghum for hay Johnsongrass	0-0-0	10-40-0	0-0-0	20-40-0	20-40-20	Topdress with 20-0-0 after each cutting or each time grazed down if soil moisture is adequate
Cotton & sesame	0-0-0	20-40-0	0-0-0	20-40-0	30-60-30	
Cotton (irrigated)	30-30-0	30-60-0	30-60-0	30-60-0	40-80-40	Sidedress with 40-0-0 at first form
Annual legumes	0-20-0	0-60-0	0-20-0	0-60-0	20-60-20	
Oats and other small grain for grain only	0-0-0	20-40-0	0-0-0	20-40-0	20-40-20	Topdress with 30-0-0 in February
Peanuts	NR	20-40-0	NR	20-40-0	20-40-20	
Pastures (cultivated)						
Grasses only including small grains	30-0-0	30-30-0	30-0-0	20-40-0	20-40-20	Topdress with 20-0-0 each time grazed or cut if soil moisture is adequate
Pastures (temporary) Grasses and legumes including small grains	0-0-0	15-30-0	0-0-0	15-60-0	15-60-30	
TRUCK CROPS	NR	NR	NR	30-60-0	30-60-30	
Grapes						
Vegetables	0-0-0	30-60-0	0-0-0	30-60-0	30-60-30	Sidedress with 30-0-0 in 40 days under favorable moisture conditions.
General garden	40-80-0	40-80-40	40-40-40	40-80-0	40-80-40	Sidedress in 40 days with 40-0-0
FRUIT TREES	Pounds of Nutrients per inch diameter of tree					Sidedress with 1/2 pound 20-0-0 in May or June. For young trees, 1/2 amount for bearing tree
Apples, pears Bearing trees	NR	1 lb. 10-10-0	NR	1 lb. 10-20-0	1 lb. 10-20-10	
Peaches, plums Bearing trees	NR	1 lb. 10-10-0	NR	1 lb. 10-20-0	1 lb. 10-20-10	Sidedress with 1/2 pound 20-0-0 in May or June. For young trees, 1/2 amount for bearing tree



FRUIT TREES		Pounds of Nutrients per inch diameter of tree				Sidedress with $\frac{1}{2}$ pound 20-0-0 in May or June. For young trees, $\frac{1}{2}$ amount for bearing tree
Apples, pears Bearing trees	NR	1 lb. 10-10-0	NR	1 lb. 10-20-0	1 lb. 10-20-10	
Peaches, plums Bearing trees	NR	1 lb. 10-10-0	NR	1 lb. 10-20-0	1 lb. 10-20-10	Sidedress with $\frac{1}{2}$ pound 20-0-0 in May or June. For young trees, $\frac{1}{2}$ amount for bearing tree

\*With irrigation, add 50% to the recommendations, except as indicated for grain sorghum and cotton.

The recommendations given above are based on normal moisture conditions for the area, to insure good yields. In years when subsoil moisture is very low and surface soil moisture is below normal, then use  $\frac{1}{3}$  to  $\frac{1}{4}$  less at planting time, using the remainder as a sidedressing if rains come within 30 days from planting.